

WHAT IS CLAIMED IS:

1. A stent graft prosthesis for placement in a vessel comprising:  
a graft portion including a first end, a second end, and a main  
body portion, generally tubular in shape, that comprises a first layer of  
5 material;  
a cuff portion, having a first edge and a second edge, located  
about the first end of the graft portion, the cuff portion comprising a second  
layer of material closely adjacent the main body portion; and  
a supporting structure attached about the first end of the graft  
10 portion.
2. The stent graft prosthesis of claim 1, wherein the cuff portion is folded  
over the main body portion such that the proximal, first end of the cuff  
portion comprises a folded edge and the second end comprises a free edge.
3. The stent graft prosthesis of claim 2, wherein the cuff portion is folded  
15 over the outside of the main body portion.
4. The stent graft prosthesis of claim 3, wherein the cuff portion comprises  
a plurality of flaps extend over the first edge of the graft portion.
5. The stent graft prosthesis of claim 1, wherein the supporting structure  
includes an anchoring stent attached to the cuff portion and main body  
20 portion.
6. The stent graft prosthesis of claim 1, wherein the cuff portion comprises  
one or more elements separate of the main body portion that are attached  
thereto.

7. The stent graft prosthesis of claim 6, wherein the cuff portion comprises an external sealing zone extending laterally from the main body portion, the external sealing zone configured to engage the walls of the vessel to facilitate sealing therebetween and reduce leakage of fluid.
- 5     8. The stent graft prosthesis of claim 1, wherein the second edge of the cuff portion comprises a frayed portion.
9. The stent graft prosthesis of claim 1, wherein the second edge of the cuff portion comprises a fringed portion.
- 10     10. The stent graft prosthesis of claim 1, wherein the cuff portion comprises a second material different than that of the main body material
11. A stent graft prosthesis for placement in a vessel comprising:  
        a graft portion including a main body portion generally tubular in shape, that includes a first end and a second end;  
        a cuff portion comprising an external sealing zone generally  
15     located at or closely adjacent the first end of the graft portion, the external sealing zone having structure that generally encircles and extends laterally from the main body portion to create a circumferential seal between graft portion and the adjacent walls of the vessel to reduce leakage of bodily fluid thereabout.
- 20     12. The stent graft prosthesis of claim 11, wherein the cuff portion comprises a frayed portion.
13. The stent graft prosthesis of claim 11, wherein the cuff portion comprises a fringed portion.

14. The stent graft prosthesis of claim 11, wherein the cuff portion comprises a band of material situated therearound.

15. The stent graft prosthesis of claim 14, wherein the band of material comprises a second material, wherein the second material is different than  
5 that of the main body of the graft portion.

16. A stent graft prosthesis for placement in a vessel comprising:  
a graft portion including a main body portion;  
an outer cuff portion, having a first edge and a second edge, that  
is located about the first end of the graft portion and attached thereto; and  
10 an anchoring stent attached to the main body portion and outer  
cuff portion, the anchoring stent extending proximally therefrom.

17. The stent graft prosthesis of claim 16, wherein the outer cuff portion comprises an external sealing zone.

18. The stent graft prosthesis of claim 16, wherein the outer cuff portion  
15 comprises a frayed portion.

19. The stent graft prosthesis of claim 16, wherein the outer cuff portion is folded over the main body portion with the anchoring stent being attached thereover.

20. The stent graft prosthesis of claim 16, wherein the outer cuff portion is  
20 folded over the main body portion with the anchoring stent being attached  
between the outer cuff portion and the main body portion.